



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/764,281 | 01/23/2004 | Chul Park | D0540-7003.10 | 9689 |
| 37462 | 7590 | 08/30/2005 | EXAMINER | |
| LOWRIE, LANDO & ANASTASI RIVERFRONT OFFICE ONE MAIN STREET, ELEVENTH FLOOR CAMBRIDGE, MA 02142 | | | HRUSKOCI, PETER A | |
| | | ART UNIT | | PAPER NUMBER |
| | | | | 1724 |

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-------------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/764,281 | PARK ET AL. |
| | Examiner | Art Unit |
| | Peter A. Hruskoci | 1724 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 6/16/04, 2/7, 721, and 7/22/05.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11 is/are pending in the application.

4a) Of the above claim(s) 1 and 2 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 3-11 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

The disclosure is objected to because of the following informalities: In the specification on page 1 line 16 "waster" and on page 2 line 11 "coagulation" appear to be erroneous, and should be changed to - waste - and - coagulation of -, respectively.

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Albertson 3,423,309. It is submitted that Albertson disclose (see col. 2 line 4 through col. 5 line 20) the method step recited in the instant claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson. The claims differ from Albertson as applied above by reciting that the trivalent cation facilitates or affects the coagulation of biocolloidal material to form flocculant material. It is submitted that the suspended solids in the sewage treated with trivalent aluminum cations in Albertson would appear to include biocolloidal material, which would be coagulated and flocculated as in the instant method. It would have been obvious to one skilled in the art to modify the method of Albertson by facilitating coagulation and flocculation of biocolloidal

material in the wastewater, to aid in removing the suspended solids or biocolloidal material from the wastewater.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albertson as above, and further in view of the Higgins et al. publication (March/April 1997 pages 215-224). The claims differ from Albertson as applied above by reciting specific steps for forming a flocculant material while maintaining ratios of monovalent, divalent, and trivalent cations, respectively. Higgins et al. disclose (see pages 215-224) that it is known in the art to maintain specific ratios of monovalent and divalent cations in activated sludge, to aid in forming a floc in the activated sludge or wastewater. It would have been obvious to one skilled in the art to modify the method of Albertson maintaining the recited ratios in view of the teachings of Higgins et al., to aid in forming a flocculant material in the wastewater. The specific ratios maintained, would have been an obvious matter of process optimization to one skilled in the art, depending on the specific wastewater treated and results desired, absent a sufficient showing of unexpected results.

Applicant's election without traverse of Group II, claims 3-11 in the reply filed on 7/21/05 is acknowledged. The restriction requirement is made final.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter A. Hruskoci
Primary Examiner
Art Unit 1724

8/25/05